

## ABSTRACT OF THE DISCLOSURE

The present invention provides a method for the excitation of a fluorescent sample and the measurement of the fluorescent emission. The method of the present invention has the advantage of significantly reducing the amount of background fluorescence. The method includes the steps of exciting a sample in a substrate with a beam of light that enters the substrate at an angle less than or equal to  $45^\circ$ , and preferably, less than or equal to  $20^\circ$ , and then collecting the fluorescent emission from the sample with a lens system which focuses the emitted light onto a CCD for detection. Although the following description of the present invention uses a scanning system using channel plates by way of illustration, the method described herein may also be used with non-scanning systems as well as capillary systems.